

CLAIMS

What is claimed is:

- 1 1. A wireless communications network comprising:
2 a plurality of Mobile Subscriber (MS) units;
3 at least one base transceiver station (BTS), each BTS communicating
4 wirelessly with ones of said MS units in a network cell;
5 at least one mobile switching center (MSC) administering to said at least one
6 BTS and to any neighboring ones of said at least one MSC; and
7 at least one Gateway Mobile Location Center (GMLC) supporting location
8 services (LCS) and providing an access node for LCS service requests, wherein
9 requests for services from one MS unit of said plurality of MS units are not placed
10 on hold until a LCS request to said one MS unit completes.

- 1 2. A wireless communications network as in claim 1, wherein a response to
2 said request for services is provided to said one MS unit before a response is
3 provided for said LCS request.

- 1 3. A wireless communications network as in claim 1, wherein upon said request
2 for services said MSC initiates a faked call control connection to said one MS unit.

- 1 4. A wireless communications network as in claim 1, further comprising:
2 at least one base station controller (BSC) between a plurality of BTSs and
3 said MSC, each said BSC administering to said plurality of BTSs, and wherein upon
4 said request for services, said BSC initiates a faked radio resource location protocol
5 (RRLP) request to said one MS unit.

- 1 5. A wireless communications network as in claim 1, further comprising:
2 a Serving Mobile Location Center (SMLC) performing positional
3 measurement for said plurality of MS units.

1 6. A wireless communications network as in claim 5, wherein upon said request
2 for services said SMLC initiates a faked radio resource location protocol (RRLP)
3 request to said one MS unit.

1 7. A wireless communications network as in claim 1, wherein said at least one
2 cell is a plurality of cells, and said LCS service requests comprise requests for value
3 added services, emergency services and legal and lawful interception services.

1 8. A wireless communications network as in claim 1, wherein said LCS service
2 requests are mobile terminating location request (MT-LR) and said requests for
3 services are mobile originated (MO) requests.

1 9. A wireless communications network as in claim 1, wherein said wireless
2 communications network is a Global System for Mobile Communication (GSM)
3 network.

1 10. A wireless communications network comprising:
2 a plurality of Mobile Subscriber (MS) units;
3 a plurality of base transceiver stations (BTSs), each BTS in a network cell
4 communicating wirelessly with ones of said MS units in said cell;
5 a plurality of base station controllers (BSCs) administering to ones of said
6 plurality of BTSs;
7 a plurality of mobile switching centers (MSC) administering to said plurality
8 of BSCs and to any neighboring ones of said plurality of MSCs;
9 at least one Serving Mobile Location Center (SMLC) performing positional
10 measurement for ones of said plurality of MS units; and
11 at least one Gateway Mobile Location Center (GMLC) providing an access
12 node for mobile terminating location requests (MT-LRs) from external LCS clients,
13 wherein mobile originated (MO) requests for services from ones of said plurality of
14 MS units are not placed on hold until MT-LRs to requesting said ones of said
15 plurality of MS units complete.

- 1 11. A wireless communications network as in claim 10, wherein said wireless
2 communications network is a Global System for Mobile Communication (GSM)
3 network and responses to said MO requests are provided before a response is
4 provided for a corresponding said MT-LR.
- 1 12. A wireless communications network as in claim 10, wherein upon said
2 request for services said MSC initiates a faked call control connection to said
3 requesting ones of said plurality of MS units.
- 1 13. A wireless communications network as in claim 10, wherein upon said
2 request for services one BSC initiates a faked radio resource location protocol
3 (RRLP) request to said requesting ones of said plurality of MS units.
- 1 14. A wireless communications network as in claim 10, wherein upon said
2 request for services said SMLC initiates a faked radio resource location protocol
3 (RRLP) request to said requesting ones of said plurality of MS units.
- 1 15. A wireless communications network as in claim 10, wherein said external
2 LCS clients request location services comprising: value added services, emergency
3 services and legal and lawful interception services.
- 1 16. A method of managing a wireless communications network, said method
2 comprising the steps of:
3 a) initiating a mobile terminating location request (MT-LR) for a
4 particular mobile subscriber (MS) unit;
5 b) idling the mobility management (MM) layer of said particular MS
6 unit;
7 c) initiating a mobile originated (MO) request for services from said
8 particular MS unit;
9 d) processing said MO request; and
10 e) providing a response to said MT-LR.
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- 1 17. A method of managing a wireless communications network as in claim 16,
2 wherein said response is provided in step (e) to said MT-LR after a response is
3 provided to said MO request.
- 1 18. A method of managing a wireless communications network as in claim 16,
2 wherein the step (d) of processing said MO request comprises originating a faked
3 Call Control (CC) connection in parallel with said MT-LR.
- 1 19. A method of managing a wireless communications network as in claim 18,
2 wherein said faked CC connection originates in a visited mobile switching center
3 (V-MSC) currently serving a mobile subscriber originating said MO request.
- 1 20. A method of managing a wireless communications network as in claim 16,
2 wherein the step (d) of processing the MO request comprises originating faked radio
3 resource location protocol (RRLP) request in parallel with the MT-LR request.
- 1 21. A method of managing a wireless communications network as in claim 20,
2 wherein said faked RRLP request originates in a base station controller (BSC)
3 currently serving a mobile subscriber originating said MO request.
- 1 22. A method of managing a wireless communications network as in claim 20,
2 wherein said faked RRLP request originates in a Serving Mobile Location Center
3 (SMLC).
- 1 23. A method of managing a wireless communications network as in claim 16,
2 wherein MT-LR is a request for location service (LCS).
- 1 24. A method of managing a wireless communications network as in claim 23,
2 wherein said request for LCS provides tracking data for a mobile subscriber.
- 1 25. A method of managing a wireless communications network as in claim 16,
2 wherein said wireless communications network is a Global System for Mobile
3 Communication (GSM) network.